IN THE CLAIMS

Claims 1-21 remain as follows:

1.(Previously Presented) An inspection system comprising:

a primary optical inspection device including a focusing mechanism for focusing the primary optical inspection device over a predetermined optical field of view to optically inspect a sample; and

an auxiliary sensor apart from the focusing mechanism, the auxiliary sensor for mapping a sample height by obtaining height data for at least one point on the sample, wherein the at least one point is offset from the field of view of the primary optical inspection device.

2.(Previously Presented) The inspection system of claim 1, wherein the height data is used to position the inspection device in focus during an inspection of the sample.

3.(Previously Presented) The inspection system of claim 1, wherein the height data is used in an interpolation to calculate an exact height of each picture needed for the inspection of the sample by the inspection device.

4.(Previously Presented) The inspection system of claim 1, wherein mapping the sample height is performed as a separate operation before inspection of the sample by the inspection device occurs.

5.(Previously Presented) The inspection system of claim 1, wherein the process of mapping the sample height is performed concurrent with inspection of the sample by the inspection device.

6.(Previously Presented) The inspection system of claim 1, wherein the auxiliary sensor is used to measure a difference in height of features on the sample.

7.(Original) The inspection system of claim 6, wherein the features measured comprise gold or solder interconnects.

8.(Original) The inspection system of claim 1, wherein the height data comprises a pattern comprising a single point, a random set of points, a specified set of points, or a fixed 2D grid of points.

9.(Original) The inspection system of claim 1, further comprising:

a calibrator for finding the offset between the auxiliary sensor and an inspection lens or matrix of lenses.

10.(Original) The inspection system of claim 1, wherein the auxiliary sensor comprises a 3D point sensor.

11.(Previously Presented) An inspection system comprising:

a camera for inspecting a wafer surface; and

a 3D point sensor apart from the camera for generating height data for a plurality of points on the wafer surface; and

a wafer mapping module for using the height data to generate a three-dimensional height map of the wafer surface prior to an inspection of the wafer surface.

wherein the three-dimensional height map is used for setting the focus of the camera during the inspection.

12.(Original) The inspection system of claim 11, further comprising:

an inspection platform for holding the wafer while the wafer is inspected.

13.(Original) The inspection system of claim 12, further comprising:

a wafer alignment device coupled to the inspection platform for moving the inspection platform relative to the camera.

14.(Original) The inspection system of claim 11, further comprising:

an objective for use with the camera for inspecting the wafer.

15.(Original) The inspection system of claim 14, wherein the 3D point sensor has an equal or better depth of field than the objective to eliminate the need for focusing during inspection of the wafer.

16.(Original) The inspection system of claim 11, further comprising:

a plurality of selectable objectives for selective use with the camera for inspecting the wafer.

17.(Original) The inspection system of claim 11, wherein the 3D point sensor is a confocal point sensor.

18.(Previously Presented) A method for inspecting a wafer comprising:

providing an inspection sensor for inspecting a surface of the wafer in an optical field of view of the inspection sensor;

providing an auxiliary sensor apart from the inspection sensor for obtaining height data of the surface of the wafer;

obtaining a pattern of height data of the surface of the wafer using the auxiliary sensor, wherein the pattern of height data is obtained outside the optical field of view of the inspection sensor; and

inspecting the surface of the wafer by focusing the inspection sensor using the height data.

19.(Original) The method of claim 18, wherein the inspection sensor comprises a camera.

20.(Original) The method of claim 19, wherein inspecting the surface of the wafer by focusing the inspection sensor using the height data comprises interpolating the height data to determine heights at which to take pictures of the wafer.

21.(Original) The method of claim 18, wherein the auxiliary sensor comprises a 3D point sensor.